

For Dr. Becker

LETTER

TO THE

LONDON BOARD OF HEALTH,

OFFERING A

NEW, CONCISE, AND INTELLIGIBLE VIEW

OF THE

LEADING PHENOMENA

OF THE PRESENT

PESTILENTIAL CHOLERA,

BY WHICH A RATIONAL, SIMPLE, AND SUCCESSFUL MODE OF
TREATMENT IS ATTAINED.

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LONDON

PRINTED FOR T. CADELL, STRAND; AND
W. BLACKWOOD, EDINBURGH.

1832.

LONDON:
Printed by A. & R. Spottiswoode,
New-Street-Square.

TO

THE BOARD OF HEALTH,
LONDON.

GENTLEMEN,

I TRUST you will readily excuse me for addressing you on the subject of the Cholera Maligna, which now threatens such general devastation, when you must be well aware, that I have witnessed the disease in its most appalling form. I am still, however, further induced to trouble you on the present occasion, as the sentiments I entertain, both of the nature and treatment of this disease, differ very essentially from those of the medical gentlemen who have obtained their experience and published their sentiments in India and this country. I must also be permitted to add, that I consider myself to be bound to do so, from having had an ample opportunity of trying my opinions by the test of experience, which has confirmed them by the success of our

practice ; and I flatter myself it will be ultimately found, that although I do not enter minutely into the subject, still I shall make my opinions sufficiently plain and intelligible, and will have contributed my mite to the public advantage.

Before proceeding further, it may be proper to notice, that Mussleburgh is situated on the river Esk, close by the sea ; and the town, as well as the parish of Inveresk, is nearly equally divided through its whole extent by the river. The parish contains a population of somewhat above 9100, and the town of Mussleburgh and its immediate connections about 7500 of this number. The town is open and well aired, and its soil in general dry, and is nearly equal in warmth, and has less rain, than perhaps any parish in Great Britain. Notwithstanding these advantages, our population may be described as vicious, immoral, and miserable ; a full half being liable to the vice of all others the most destructive to religion and morals, — I mean drunkenness. This state, however, it must be observed, has not been produced by any innate viciousness or folly, but has arisen entirely from the unparalleled continuance of the last war, whereby Mussleburgh, being a favourite station for the army, was inundated with 1500 soldiers, and all their unpleasant concomitants, for the space of twenty-two years. As a proof of the healthy situation of the whole town and parish, I may state from

personal experience, during forty-four years, that I have never had a single case of Ague occurring periodically; and before the improvement in agriculture, I have known all agricultural labours at a complete stand, from the farmers' servants being laid up by Ague;—and only when crowded with the military, together with high-priced provisions, and other causes of misery, were liable to Typhus. For these last twelve months, poverty, conjoined with the vice of drinking, and wretched accommodation, has been again operating very extensively; and we were suffering considerably from Typhus, when this horrible pestilence appeared, and which has, in the short period of little more than five weeks, carried off nearly 250 of the inhabitants, being about one in every thirty-five of the parish, and nearly equal to twenty months of the usual mortality; and before we finally get rid of this dreadful scourge, our deaths, I have no doubt, will amount to 300, being nearly one in thirty of the whole population.

When we attend to the topography of London, and any other place in the British empire, compared with that of Mussleburgh, there are certainly few places possessed of the same local advantages; when we again compare them in other respects, there are not many places that could afford a more ample range for the contagious influence of the Cholera, than

the very great number of our population, which were strongly disposed to suffer from its contagious effluvia, by their misery, poverty, and vice.—But when we consider the prodigious mass of every thing that can be supposed to afford scope for the pestilential influence of this disease in London, we must conclude that it cannot possibly pass over such a large mass of corruption, without displaying its contagious powers to the greatest extent. The local peculiarities, too, of any place in the British empire, I should be inclined to consider of very little consequence in promoting the extension of this disease ; for, if we could only procure habits of cleanliness, temperance, and moderation, a good constitution might be produced most readily, independent of local situation, and which is the true way to oppose and extinguish the pestilential effluvia. These observations naturally lead me to notice what has repeatedly occurred to my mind, as what would be of the greatest consequence to the general health and appearance of the people in this form of disease —I mean some plan for securing a circulation of good air, and which I have thought could be procured by a proper distribution of ventilating machines, properly constructed and distributed. Such a circulation of air would be obtained, as would not only improve the health and *appearance* of the inhabitants, but the picturesque appearance of the city, and also remove the frequent

dense, and disagreeable states of the atmosphere. It is also deserving of particular notice, that there has not been one individual affected with the Cholera in Mussleburgh, who lived in a front house, or was unconnected with closes or alleys. This distinctly shows the necessity of taking some measures to provide well-aired, and comfortable habitations for the labouring classes of the community, and this can only be done, by building such accommodation in proper situations, laid out in squares, &c. ; for all must agree, that this part of the population are as essentially necessary for the well-being of society, as the highest.

When, in 1824, I published my opinion concerning Cholera, in connection with its production by summer and autumnal heat, &c., I was then, and still am convinced, that such a disease is neither contagious nor epidemic, in the proper sense of these terms, and that it only appeared to be so, from the great and long-continued heat being generally applicable to a whole district or tract of country ; and I then also endeavoured to prove, from the whole history of the disease, that all the phenomena were distinctly referable to a debility of the general system, and this more especially affecting the chylopoetic viscera and alimentary canal ; which debility is attended with increased irritability of the whole nervous system, and more especially of the great sympathetic

nerve, ending all in increased action of the atonic kind.

I also there endeavoured to show how this peculiarity was induced, and beg to refer to the chain of reasoning I then employed for arriving at the above conclusion; but as the present disease differs in some material points from the Cholera referable to heat, the omission of these arguments is not very material. They, however, no farther differ, but from the present scourge having acquired a strong putrid malignancy, which will not only produce, and is accompanied with all the symptoms of the former to a greater extent, but has the additional powers of propagating itself in all climates and seasons to the most terrific extent, and shows itself decidedly to be a disease not only possessing the most appalling debilitating powers in itself, but selects for its victims, those, whose constitutions are enfeebled and exhausted by poverty, dissipation, or old age. Indeed, it appears to me quite obvious, that, if the range of this Cholera was met by any extensive tract of country, or by a neck of land separating a poor, dissipated, debilitated, and dirty population, from those of opposite habits, its influence as a contagious epidemic, would be completely interrupted, and every country beyond such interruption, would remain entirely free from the disease; and it is, I am afraid, only from such a decided obstruction, that any

reasonable hope can be entertained of extinguishing it. At all events, it is a great comfort to know, that, even where this pest has actually occurred, it can still be checked and subdued, by opposing it with habits of cleanliness, sobriety, and comfort; and it is also very satisfactory to be assured, that much less time is required than what is commonly imagined, to produce such a healthy change in the constitution, as to enable it to resist this horrid malady. Therefore, every city and town, by even beginning now, may yet get such a start of the disease, as to render themselves comparatively safe.

It is well worth remarking, too, that not only the public in general, but the medical profession in particular, have evinced a strong disposition to view every thing connected with this malady as strange and miraculous. I must be permitted to say, I can see nothing relating to the disease but what may be most satisfactorily accounted for and explained; and the very distressing part of the present disease, viz. its mortality, we all know attaches to the plague, small-pox, &c., and need neither particularly excite our surprise, fear, nor admiration; and, like all such diseases, can be easier combated by avoiding their contagion, than by their cure. For in all these diseases, we know nothing whatever concerning the particular nature of their contagious quality, so as distinctly to extinguish it by chemical agency, but

in all of them must trust to cleanliness, ventilation, and not exposing ourselves to their contagion.

It may be also particularly remarked, that the question concerning the contagious power of Cholera Maligna, affords one of the most singular, and melancholy proofs of the different impressions which the most striking, and self-evident facts make upon the human mind, and which can only be accounted for from the weight of opinions, conceived to be good and great authority, and allowing our minds, and judgments to be warped by mere doctrines, in place of being guided by our plain and direct experience ; and, what I am afraid also has some share in it, is, having once decidedly given our opinion, we want candour and resolution to retract.

I must here avail myself of the publication of my friend and partner Mr. Moir, and refer you to it for a complete refutation of the doctrine of the anti-contagionists ; I shall, however, observe, that when I have enquired what these gentlemen meant, in answer to the notorious fact, of every one infecting another, from absolute contact, either in their persons, apartments, or clothes, or with *some one* or *some thing* with which they had had connection, you really can obtain nothing but the most vague, indefinite, and wild answer, which it is impossible for any

one accustomed to the examination of data really to comprehend, or put into the shape of probability. It is as clear as noonday that it is contagious; but these gentlemen insist that it is also epidemic, without offering any reason, but that it cannot be proved in *every* instance to have been transmitted by contact,—a request deserving of not the very least attention; because whoever attends to the communications existing in the present state of society must be at once satisfied, that there can be no want of opportunities of contact always being afforded; and although these gentlemen were accidentally to lay their hands upon one, who will not confess that they have been in contact with the disease, I should be glad to know the value of such, when it is well known to us all, with what difficulty we confess any fault, and especially, at present, the fault of transmitting Cholera; particularly, too, when this charge attaches to those who would have no great delicacy about the matter at any time.

But farther: it is surely neither inconsistent with medical history in general, nor with that of this particular malady, that a disease originally possessing no contagious or epidemic powers may acquire it; a fact which is well known to the profession to occur, in all cases of a sporadic nature, in most kinds of continued fever, and in many cases of intermittents; nay, in

almost every disease of an endemic nature, by long continuance and of universal application ; and the profession also know, that all these diseases, which are confessedly epidemic at their outset, can have this property increased or diminished, according to circumstances. Surely, then, these new adjuncts of Cholera Spasmodica being highly putrid and malignant, and capable of propagating itself in all climates and seasons, it is quite easy to suppose, on the most rational grounds, the cholera, arising merely from heat, may have acquired by its long continuance, and spread on the continent of India, and passing through the miserable countries and wretched population of Asia to Moscow, and lastly through Europe, occupying a period of fourteen years for arriving in Britain ; and still, however, these new adjuncts not having changed the fundamental nature of the disease, nor the *ratio medendi*, but merely requiring additional vigour and exertion in its treatment.

It occurs to my mind, that much confusion has arisen from the vague manner of employing words to explain the manner in which diseases are supposed to propagate themselves ; and it is greatly to be wished, that some determinate etymology were adopted, for affixing a standard signification to their employment in medical writings. What I would beg leave to suggest is, that the term *endemic*, which has been hitherto

principally used for denoting diseases confined to particular districts, — such as the *goître* in certain parts of Switzerland and Derbyshire, *cretinism* among the Alps, &c. &c., — I should propose to be laid aside entirely, as not being fairly deducible from their etymology, — because those diseases, or a predisposition to them, cannot be supposed to have existed originally in the human body, but must certainly have proceeded from causes connected with soil, climate, and food. To this class of diseases, then, I should propose to apply the term *indigenic*, while I would restrict the word *endemic* to diseases originating merely in atmospheric causes; or such as are entirely external to the body, and producing effects upon it not capable of propagating themselves; such as intermittent fever, Cholera from hot weather, some kinds of influenza, Dysentery, Ophthalmia, &c.: and under the term *epidemic* I would propose to include all those diseases which can propagate themselves, by their effluvia emanating from the human body, — such as Pestis, Cholera Maligna, Small-pox, Measles, Hooping Cough, Scarlatina, and all the different species of continued fever. It might also be occasionally found convenient to use the term *endemial* and *epidemial*, as implying a less extensive range of signification. For the better elucidation too of medical writings, it is much to be wished that appropriate definitions were

attached to the words *infectious* and *contagious*; which, though certainly entirely distinct in their etymologies, are often used almost synonymously. To obviate the obscurity and inaccuracy which it frequently occasions, I should propose that *infection* and *infectious* be only applied to those diseases not depending upon a derangement of the vital functions, and conveyed in quite a tangible form, — such as Psora, Lues Venerea, Herpes, Lepra, &c.; and should only employ the terms *contagion* and *contagious* where they can be coupled with the adjuncts of *endemic* or *epidemic*; or, in other words, to diseases propagated by a vitiated state of the atmosphere.

From this arrangement and definition of terms, I mean to convey, that the effluvia of our present Cholera Maligna is contagiously epidemic; being only capable of propagating itself by absolute contact, or very nearly so; and, at all events, not extending beyond the limits of the smallest apartment which the patient may be placed in; and you may rely upon it, if ever my observation was worth any thing, there is nothing that future experience will more distinctly confirm.

If we only reflect for a moment upon the country and climate, the hill and dale, the hot and cold, the stormy and calm weather, the crowded and scattered population, the barren and fruitful, the rapid and slow communication, the sober or dissipated, the cleanly or dirty, the

weakly and strong, with which it came in contact, all surprise must vanish concerning the great variety of aspects it assumed; and the length of time it has taken to arrive at Mussleburgh can only have been the result of being contagiously epidemic; whereas, had it been conveyed by the atmosphere, its progress would have been rapid, general, and steady; and all means of prevention, both before and now, must not only have been useless, but even ridiculous. I shall offer one observation more, as, perhaps, assisting to reconcile seeming contradictions. — I mean, that on many occasions the Cholera Maligna and Cholera Spasmodica might exist contemporaneously in the same country or district, — for nothing was more likely to occur in warm seasons and climates. Indeed, the anti-contagionists seem to have only one very strange foundation to stand upon, viz. *that every one does not take the disease.*

With regard to the supposed peculiarity of some of the symptoms and phenomena which attend this disease, the very distressing symptom of spasms or cramp, which occurs not only in this, but in the Cholera produced merely from hot weather, afford the most decisive evidence, that both species are clearly diseases of general debility, and consequent irritability: that is to say, spasms or cramp are frequently met with in slender and weakly habits; they are a complaint peculiarly inci-

dental to females ; they are very common to women during the period of gestation, and are very frequently met with in convalescence from fever, or other diseases causing debility, — more especially upon exercise. They are also well known to occur after any violent and long continued muscular exertion, — such as dancing, leaping or running, and walking ; and are a very frequent complaint with weavers, blacksmiths, laundry-maids, &c. The reason, too, that the lower extremities should suffer particularly from this symptom is, not only from their always undergoing more constant and severe exertion, and consequent exhaustion, but also from their being placed at a greater distance from the source of nervous energy. Besides all this, the phenomena of the disease itself afford the most satisfactory proof that this symptom is only consequent upon a reduced and slender habit ; for, independent of the malady attacking such, the complaint only shows itself at all, and only to a great extent, where the vomiting and purging are very severe, and of some duration, and of course has produced great debility.

Another symptom, evidently supposed to be very singular and important, from the attention it has obtained, and the minuteness with which it is described, — I mean the fluid matter ejected from the stomach and bowels, — as if it was of the greatest consequence in ascertaining the nature,

and determining the treatment, of the disease ; whereas it owes its quantity and quality merely to the prodigious increase of the fluids poured into the stomach and alimentary canal from the different secreting vessels, in consequence of the debility and violent spasmodic action of these parts, accompanied with the absence of bile. This draining of fluids, very probably, too, attended with a retrograde action of the lacteals and lymphatics, also readily explains the rapid exhaustion and general collapse ; for these consequences distinctly prove that the general mass of fluids, upon which the plumpness and vigour of the body depend, are completely exhausted by the extraordinary action of the whole absorbent system. This astonishing state of collapse, too, also readily explains another of the phenomena attending this disease, upon which some stress is laid, as being singular and surprising, — I mean, the state in which the urinary bladder is found, upon inspecting the bodies of the deceased, viz. that it is completely empty, and quite spasmodically contracted. I think that this viscus should be found wholly empty in such a state of collapse need not surprise any one ; more especially, too, when this state has been produced by such profuse evacuations of fluid matter. In almost every case, after death the bladder will be found nearly empty, and in a state of collapse ; but when in Cholera

we consider the violent muscular spasms which have existed in the abdominal viscera, and over a great part of the body, it is not to be wondered at if the bladder is also found particularly contracted.

Again, the absence of any urinary discharge for twenty-four, thirty-six, or forty-eight hours after the patient begins to recover, is mentioned as another striking peculiarity; but from what has been already noticed, of the total discharge of nearly the whole fluids of the system, it surely need not be a matter of surprise that all the fluids which may be swallowed for many hours after should be absorbed, and applied by the circulating system to the supply of the very astonishing loss which had been previously sustained; and that this is the real state of the case, I have had numerous opportunities of witnessing, from the effects of the sudden and extensive evacuations of any kind, such as violent diarrhœa, and more especially if attended with vomiting, vomiting unaccompanied with diarrhœa, and in cases of severe hæmorrhage.

Other appearances, too, upon inspecting the bodies of those dying of the disease, have been supposed to be of considerable consequence for ascertaining the nature and treatment of this malady. I really do not see how much could be expected from such investigations; for when it was found to be a very frequent occurrence that perfect recoveries took place in the very worst

states of the disease, it was quite impossible that any organic lesion could have been produced ; and accordingly no phenomena were discoverable but what could be all easily and satisfactorily accounted for, either from the state of extraordinary collapse, or violent spasmodic action, — such as congestion of blood about the heart, lungs, and liver, &c. ; and therefore, although the zeal and industry of the medical gentlemen, in the first instance, is certainly highly to be applauded, still more than enough has been done in that way to satisfy the most sceptic and inquisitive : and I believe it may be here stated as a truth, that two men who were employed to take up a body at Tranent, or Prestonpans, for the purposes of dissection, have both died of Cholera. This is a sufficient answer to Dr. Craigie's letter ; and it is certainly, at any rate, quite unnecessary to be so scientific upon a point which, if not most evident, the public security and comfort cannot for one moment entertain. Indeed, I am of opinion that such post-mortem examinations should be entirely abandoned ; both from their uniformly affording no opportunity of throwing additional light upon the disease, and contributing nothing to its treatment, but from their frequently exposing all parties to danger.

It is to the prevention, Gentlemen, more than the cure, of this distressing malady that our exertions should be directed ; for, by due atten-

tion to the one, the ravages of the pestilence may be greatly circumscribed, made comparatively harmless, and probably extinguished ; where, if our efforts are only directed when it actually exists, the most appalling and terrific destruction cannot be prevented.

I shall detail as concisely as possible, those means which we have employed here, and from which, we think, we have derived great benefit. These means naturally divide themselves into those done under public authority ; those by the medical practitioner ; and those by the public within their own domiciles. Under the first is included the keeping the streets, lanes, and closes, or alleys, &c. in perfect order and cleanliness, by fumigating and whitewashing — by increasing ventilation wherever it is deficient — by increasing the supply of food to the poor, and adding as much as possible to their general comfort, by soup, coals, flannels, and blankets ; and where the disease has made a near approach, to take every reasonable precaution for preventing the smallest communication. When it has actually made its way into a community, the most determined means for isolating every case should be adopted, not only by removing the infected person to an Hospital, but also placing the whole family under surveillance. The example which the Board of Health in Edinburgh have set us, is highly laudable ; for by the

vigour and energy which they have displayed, they have kept this formidable enemy at bay for a month, although existing within five miles of them in the most appalling form, and the means which they have employed, and the charity, and vigour they have shown, deserve our close imitation.

The means which the profession have employed here, for preventing the infection spreading in the houses and apartments of those labouring under the disease, are, fumigating, with the means already mentioned, with the addition of the fumes of the nitric and muriatic acids, burning tar, turpentine, vinegar, fumes of tobacco, flashing gunpowder, throwing vinegar and spirits of camphor throughout the apartment, and paying great attention to keeping the bed-clothes and surface of the body wholesome by cleanliness, and sprinkling of vinegar mixed with spirit. When death has ensued, and the family removed, or whether or not that can be obtained, the house is whitewashed with hot lime. From the steady use of these means, we have, in general, succeeded in checking the farther spread of the pestilence in the immediate dwellings; and have also found them of great benefit in further securing the public safety. With regard to myself, for the first five or six days of the Cholera raging here, I was quite sensible of its exerting an influence over me, such as headach,

sickness, coldness of the surface, and pulse about 96, with a disordered state of the stomach and bowels ; but by taking care never to visit any one before swallowing some breakfast, with half a glass of the very best brandy after it, again taking a glass of the best port or sherry about one o'clock, with a biscuit, and dining regularly at, or as soon after four as possible, upon a plain but rather solid diet, and with two or three glasses of port wine, if soup or fish made no part of my diet ; but if I ate of several dishes, I preferred the good old Scottish custom of a dram to the wine, and found myself always much lighter after this last practice. I never used tobacco, although I have recommended it to general use, in any form ; but I washed my temples and forehead with aromatic vinegar, and spirits of wine and camphor, mixed with a little water, every time I returned home, and also applied the mixture to my clothes, and these, together with chewing cinnamon, and keeping a regular state of the bowels, formed the whole of my defence ; and in eight days I got the better of my different ailments ; my pulse became regular, and I now enjoy better health than before the scourge came amongst us.

As to those means which depend upon the public themselves, they should see that cleanliness is carefully attended to in every part of their domestic arrangements. No female servant

should be allowed to go out of doors, and nobody's servant allowed to come into the house. Bakers and butchers, &c. should be dismissed instantly upon delivering their errand; in short, high and low should assist and forward the grand object of public safety, by cheerfully submitting to every subordination which those in authority think necessary in the present emergency. They should also conduct themselves with moderation and propriety, and show a proper feeling under the present scourge. There should be no general revelling, feasting, and extravagance, the public distress giving a ready vent for all our superfluous enjoyments; and all places of public amusement should undoubtedly be shut, not only as being unseemly, but as giving every chance of spreading the disorder, even among the higher ranks of society, who might otherwise escape it. It may also be proper to notice here, that we endeavoured to bury the dead within six or eight hours after their death, which I would also strongly press to be done by the proper authorities wherever this disease shall exist, both as contributing materially to ensure the public safety and comfort, and also that of the household of the sufferer. And with regard to the idea of some being interred alive, I should deem it quite impossible, as the wretched sufferer approaches death so steadily and so evidently, that no mistake of the kind can happen. I may also men-

tion, that just before this horrid pestilence began, we had just completed our arrangement for burying the poor so effectually, as to prevent every chance of the bodies being taken up for dissection — this plan was, merely carrying down the common dimensions of a grave to a depth of between twenty and thirty feet by the assistance of very simple means, in which has been interred from fifteen to twenty bodies of those who had died of this Cholera, and was of the most signal service.

It is evident, however, that the regimen I have recommended to its full extent can only be obtained by the more substantial classes of society; but this difference is at present in a great measure counterbalanced by soup kitchens, the distribution of coals, flannels, and other charities: besides, it is really not of that consequence which at first sight may be imagined; for our comforts are all comparative, and the labouring class in this country have it in their power at any time, by proper conduct, to produce a sound, healthy, and vigorous constitution, by making a proper use of the means within their reach. They should in this respect follow the example of the Germans and French; for though their food does not contain, in general, a morsel of flesh, still they thrive upon it, and appear active, healthy, and apparently in good condition. In Germany, their food is almost wholly vegetables: rye bread, pota-

toes, carrots, &c. Every family prepares a winter stock of cabbage and French beans, preserved in barrels by means of a salt pickle : the portion for daily use is washed and boiled. From the nature of this food, a sufficient portion seems always attainable ; a benefit farther secured by a portion of land attached to each cottage. They also have in their power a portion of wine, somewhat resembling water pleasantly acidulated with vinegar. They expose their mattresses and bedding to the open air daily ; and although their houses do not seem well ventilated from their windows, still this is amply compensated by their living so much in the open air, to an extent which in this country we have no idea of ; and their houses have been perfumed with the smoke of tobacco ever since their erection. It seems highly probable that, from this sober and regular mode of living, together with the cordon of Austrian and Prussian troops which were drawn round Poland, the range of the Cholera has been so much circumscribed, as scarcely to have been in Upper Germany, and compelled to make its progress through Lower Germany, following the communication by the banks of the Elbe. In France, too, the fare of the peasantry and lower classes is somewhat better, as they may occasionally contain more animal food, and always more agreeable, from their soups being seasoned with warm herbs ; and these messes, with bread soaked in, make a com-

fortable meal ; vegetables and fruits are also open to all ; and both in France and Germany coffee is indispensable. Now, it would be easy to show that the daily wages of even the most moderate description in this country, if properly managed, could reach a healthy and ample fare. I am, however, satisfied that the farther progress of this horrible disease will prove to the world the great benefits of sobriety, temperance, and industry ; for that part of Europe, whose habits are simple and sober, will easily escape, while it will prove a scourge to the population of the British Isles, and expose their dissolute habits to the rest of mankind. I cannot allow this subject to escape from me, without adding one word more, and that is, to declare that no nation deserves, or can thrive without religion and morals being made its foundation. I am afraid the one received its death-blow nearly three years ago, and the low price of whiskey in Scotland will finish what remains. It is imperatively demanded that the landed proprietors, the church, and the public must instantly apply to government for the only remedy — raising spirits to ten or twelve shillings per gallon.

Before proceeding, Gentlemen, to the means I have used for combating the different stages of Cholera Maligna, I shall endeavour to place before you my *rationes medendi* as concisely as possible. I have already mentioned, that I con-

sider our present enemy only different from the common Cholera arising from heat, as it has acquired the adjuncts of being unconnected with warm weather, as being more putridly malignant in its symptoms, and as possessing distinctly a highly contagious property. It is only to this last species of Cholera that the following observations apply.

Upon my viewing, Gentlemen, the patients' situation, when in the state of spasmodic and complete collapse Cholera, all idea of using remedies for promoting further evacuation by vomiting, and purging, were immediately abandoned ; the only indication being, if possible, to put a stop to the retching and discharge by stool *quam primum* ; as the whole situation, danger, and distress of the patient could be in no other way accounted for, but from the occurrence and excess of these actions. I am also satisfied, that the situation of my patients clearly evinced, that if the evacuations had not already gone on to the extent of carrying away all offending matter, they had, at all events, existed to the extent of reducing the patient to a state of *articulo mortis*, so that every further effort in *that way* appeared evidently not only to be useless, but likely to be followed by the most fatal results.

It is truly astonishing, with this picture actually vividly existing before our eyes, that evacuants of every description, not excepting

emetics and purges of the most active and drastic kind, were administered, and the treatment of a disease, embracing in all its history and phenomena the most decided atony of system, should have been treated as a complaint *originating from bilious accumulation and congestion*, resembling many other bilious affections peculiar to warm climates. This practice is the more remarkable, as the disease almost entirely attacks that class of society whose mode of living excludes the probability of accumulation or congestion of bile, and where any kind of evacuations are attended with the most debilitating effect; besides, what possible grounds are there for this opinion, when if any individual shall be exposed to a strong source of infection, he will be hurried into eternity in a few hours, although previously in the most perfect health, with no appearance of bilious congestion about him?

It seems to me really very extraordinary, that the necessity for the discharge of bile or other acrid matter should here have seemed so imperative. If any offending matter was really the cause of the extraordinary action of the stomach and intestinal canal, surely it was highly probable such must have been swept away, by such extraordinary excitement of these organs; but even allowing that this had not been the case, certainly the moribund state of the patient should have put an end to the idea of promoting,

for the present, further evacuations ; as these discharges could be considered, from their effects, in no other light but the most alarming and dangerous diseased actions. Besides, it should be well known to every medical man, that these actions of the stomach and intestinal canal, after being once excited, will continue, from irritability and habit, long after the offending cause is removed ; nay, indeed, it will uniformly be found, that the continuation of the diseased actions of vomiting and purging form the grand source of all that is to be dreaded ; and unless these actions are subdued, the cure of the disease is a problem beyond the reach of my comprehension.

Indeed, Gentlemen, I would propose to sum up my view of the disease in the following terms : — *The state of the human body particularly pre-disposed to this afflicting disease, may not unaptly be compared to an electric body very negatively charged ; and nothing is wanting for the production of the disease but the application of an exciting cause, on the nature of which the particular kind of disease produced depends : and here the exciting cause is a highly putrid malignant contagious effluviu, immediately producing all the phenomena now generally described, and well known under the title of Cholera Maligna.*

Having thus, Gentlemen, endeavoured to arrive at a determinate view of the nature of this Cholera, I apprehend it will not be necessary to

enter into a minute detail of the means best calculated for its treatment. It is, however, never to be lost sight of, that this horrid malady is frequently, but very far from always, most distinctly divisible into incipient, or what may be called premonitory symptoms ; distinct or spasmodic ; and that of complete collapse, or Cholera Asphyxia ; and that each of these stages require different and additional modes of management.

I have already said, that I deem it quite superfluous to give here a minute detail of the symptoms which characterise this horrible disease, but shall take the liberty of referring you to the numerous publications upon this subject, where they have been given with great minuteness and accuracy ; and very lately by my partner, Mr. Moir, to whose treatise I must again beg to refer you, my object being solely to present you, Gentlemen, with what appears to me both a new and a true picture of this malady ; and that the practice of both Mr. Moir and myself have been entirely regulated thereby.

In the first stage we have been able to cure, or rather prevent the occurrence of even Spasmodic Cholera, in every instance ; and in the second or spasmodic stage, we have also been able to prevent the stage of complete collapse in 9 cases out of 10 ; but in the stage of complete collapse, or Asphyxia, we have not much exceeded curing 1 in 3. We have kept regular

schedules, which will serve to show this result, and we have admitted no premonitory cases into them. I apprehend it is from not attending to these distinctions, and admitting all, even the premonitory stage, nay, cases of mere apprehension, as cases of the real existence of the disease, that such inconsistent and contradictory accounts of the number of deaths and cures, compared with the actual number of cases, make their appearance.

What has been called the incipient or premonitory stage of this Cholera, has frequently no real connection with it, being nothing more than derangement of the tone of the stomach and intestinal canal, produced by the anxiety and fear which this fatal disorder produces, and which I beg particularly to caution the public to guard against, as nothing will afford a better opportunity for the contagion of Cholera to influence the system. From this state of mere apprehension, as well as that of the incipient or premonitory stage, the greatest and certain benefit will be obtained from merely keeping the bowels regular, by means of gentle laxatives, generally possessing a carminative and somewhat cardiac property; for it is always to be kept in view, even in this stage of the disorder, of what nature and to what extent our doses may be given; for even here, the prevailing debility of the general system must never be lost sight of; for should a drastic

purge, or, which is nearly the same, a strong dose of any laxative, be given, the other two stages of the disease will be hurried on, and the patient carried into eternity in a few hours. This stage is easily managed by rhubarb and magnesia, or magnesia alone, mixed with peppermint or cinnamon water, with moderate doses of tincture of rhubarb or senna, with preparations of columba and rhubarb, with aloetic pills, and in some few cases very moderate doses of calomel, occasionally castor oil; and all these carefully kept in check by the chalk decoction, with the different preparations, where opium is the base, such as the elect. catechu, the paregoric elixir of the London Pharmacopœia; laudanum and solid opium: by a due attention to the management of these, and regulating the diet, those cases will be all found to terminate in complete recovery.

In the second stage, viz. Cholera Spasmodica, *which I should mark with vomiting and purging having commenced, to the extent of having produced spasms, and the pulse much affected, and frequently not much better than a flutter, with considerable coldness, and the eyes somewhat sunk; the greatest exertion is necessary to save our patient from the state of complete collapse and Asphyxia.* It is in this state that I allude to our having placed in a state of safety 9 out of 10. The plan here followed is, to lay aside the thought of every medicine *but opium*, and every

cordial *but brandy*, if at hand. I instantly endeavour to get over an opium pill proportioned to the age of the patient; and if even a child, I prefer this form, and almost always, with a little exertion, succeed. If it should so happen that I cannot get over the opiate in a solid form, I then directly drop the dose of laudanum in a little powdered sugar, and succeed in that manner quite readily; having succeeded in getting over the anodyne, I do not allow a single drop of liquid, not even brandy and water, to be given for nearly an hour, but continue merely drawing a tea spoon, or feather, dipped in pure cold water, occasionally through the lips; and when the opiate has been retained that time, there is a general cessation of all the alarming symptoms, and not only small quantities of such brandy and water may be allowed, but even panada with a little brandy may be commenced giving by the end of two hours, at which time our patient is placed in a state of comparative safety; but if the symptoms should be obstinate, — in case the vomiting and purging still continue, and seriously threaten a tendency to complete collapse, — I lose no time in giving every nourishing and cordial enema, composed of strong beef brue, two glasses of good sherry, a proper quantity of flour, and as much laudanum as will be considered equal to a dose given by the mouth, which is in my opinion exactly double; and this remedy will be followed with

the most immediate benefit if only kept an hour or two, which I have in general been able to effect, by taking care that it was *only tepid*, and by pressure upon the anus continued for an hour; and the case, if cautiously managed, will end in a rapid recovery, and if any symptom of disordered bowels afterwards occur, they can be very easily managed.

If, unhappily, this second stage cannot be controlled, then it very rapidly progresses to the last stage, of complete collapse or Asphyxia, where every thing becomes a scene of horror; but even in this state, we have had a few singular recoveries when the body had become bluish and livid, as cold as ice, and not a pulse felt for two days, except at the most trifling intervals. In this state the spasms frequently cease, and so does the vomiting and purging. The same treatment is to be followed here, as has been noticed in the second stage, but with the additional caution regarding the exhibition of the opiate; for if the vomiting, purging, and spasm have ceased, there is no occasion for the opiate; and if they should still continue, the dose should be given in proportion to the urgency of the symptoms; for if an unnecessary quantity of the opiate should be administered, the most serious effects may follow from the state of debility and collapse which exists. It is here that the stimulating and cordial plan is to be trusted to, and

steadily persevered in; such as brandy in all its forms, and mixed with panada, spiced port wine, and occasionally interrupted with a mouthful of pure cold well water. I must here again press the remedy of the enemata, as already mentioned, with or without laudanum, as the occasion requires. These means, together with the application of heat to the surface of the body, which by the by we never found much difficulty in carrying to the extent required, by applying it in every possible way, but always taking great care to secure a well oxygenated supply of air for breathing, and the use of sinapisms, formed all our means of treatment, and in a few of the most appalling cases were followed with a cure.

As to the other means, or rather wild experiment, such as Electricity, Galvanism, injecting warm water into the circulating system, and Bleeding at the jugular vein, they have all terminated in the way they might have been expected by a little reflection to do, by the death of the patient.

As to the much-disputed practice of Bleeding in this disease, we have had recourse to it about half a dozen times; but it seemed so doubtful, and I may say whimsical, in its effects, that we have for the present abandoned it: I am still inclined, however, to give it a further trial, as I think the necessary distinction may at last be obtained. It has also been, I believe,

abandoned by the other Medical Gentlemen here. There is one reason for giving it up, although none of the best, but which I am afraid must always exert its influence — that is, the wretched patient is in such a state of complete exhaustion, that Bleeding seems what only remains for putting a period to his existence ; and, of course, the practice is universally scouted by the relations of the wretched sufferer. The period I am still inclined to try this practice in is, where the state of complete collapse, or Asphyxia, had just taken place ; for where it was employed here before this state had actually commenced, the patient uniformly only survived an hour or two. My reason for selecting the period when complete collapse has only recently taken place, is, that I conceive the letting blood can only prove beneficial, as it may give relief to the accumulation of blood about the heart ; and although but even a small quantity should be obtained, we all know how little may relieve such oppression, by, as it were, giving a different current to the blood ; and we shall have the farther advantage, that even such blood cannot be obtained unless some energy remains in the heart, and that the blood will not continue to flow, if Asphyxia should tend to diminish that energy.

In five of the six cases above it was used in the state of Asphyxia, and in three of them it seemed

followed with benefit ; in two it did neither good nor harm, because none could be obtained ; and in one, it was evidently highly prejudicial.

With regard to what is called the stage of Re-action, or what I think may with more propriety be simply denominated a peculiar state of recovery, it consists in nothing more than an abatement of all the distressing symptoms of the state of Asphyxia, or complete collapse, such as the cessation of vomiting, and purging, and spasms, with a diminution of thirst, and the pulse becoming more distinct, full, and less frequent ; and this state of recovery, in many cases, is followed with symptoms of less immediate, but of considerable danger. These symptoms have now the appearance of Typhus drawing near to its crisis ; and if this state happens to occur where the patient is old, or particularly debilitated, the greatest danger is to be apprehended. From what I have observed, it also appears to me that such consequences have been found to follow in many of those cases where laudanum, calomel, camphor, æther, and other stimulants had been too freely exhibited.

In managing these cases we ought never to lose sight of the debilitated state of the general system, and by frequent ablutions, the free use of diluents, particularly pure cold well water, soda water made from the acid and alkaline powders, gruels, tea, and no other food but pa-

nada, sago, &c. with good sherry, until the loaded tongue and thirst is removed, when weak beef tea, opiates, soups, &c. with rice may be added, and will be found a very pleasant and sufficiently nourishing diet. The only remedies which are found necessary are all the gentle and steady laxatives, to secure a regular alvine discharge; and all the sequelæ of the disease are to be treated upon the principles generally applicable to such symptoms, viz. determinations to the head, irritability of the stomach, irregular alvine discharges, absence of the natural discharges and secretions, anasarcaous swellings, &c. will be found in general to yield steadily, and the patient restored gradually to his former health. I have here, however, particularly to press the practice of giving enemas, either entirely for nourishment, once or twice a day where the state of the stomach and bowels, and other symptoms, will not allow of the introduction of the necessary quantity of nourishment, or coupled with laudanum once a day only to the extent of forty drops, where there is either vomiting or purging.

It now only remains for me to notice the very great variety of articles and medicines which have been recommended, or rather suggested, for trial in the treatment of the disease. I know well, that, as soon as experience shall direct those Gentlemen, they will find that to use calomel,

jalap, or antimony, ipecacuan, or any of the drastic purges, such as gamboge, scammony, &c. they will soon plunge their patients into the most imminent danger, if even employed in the first stage of the disease, and if unhappily still employed in the second, the scene will soon terminate fatally; but in the state of complete collapse, it is hardly possible to conceive they will ever be had recourse to, even with those possessing the most determined views of congestion of offensive matter; and as to the *drugs* recommended for stimulants, cordials, and sedatives, they will be all found not only useless, but highly noxious, and sporting with the urgency of the case. I should be glad to know, for what purpose we should fly to camphor, æther, castor, preparations of the volatile alkali, or other stimulants, in the first instance, and then directed to go to brandy, if these do not succeed. It occurs to my mind that, as these drugs do not possess a more stimulating and cordial quality than brandy and its preparations, and, all will allow, not half so grateful, it would have been more natural and proper to have begun with brandy and left off with the drugs, if the brandy did not succeed. In truth, Gentlemen, what I beg particularly to impress upon your minds, is, not to place too much faith in the *materia medica* in the treatment of the complaint, but take the plain common-sense view of

it with which the phenomena will present you, and, instead of ranging through the whole practice of medicine, confine yourselves to these few means, which seem clearly to husband, support, and renew the languishing and exhausted powers of your patient, and you will have the greatest satisfaction of having seldom done mischief, and frequently much good. I am,

GENTLEMEN,

With great regard,

Your most obedient,

THOMAS BROWN.

Mussleburgh,
February 16. 1832.

THE END.

LONDON :

Printed by A. & R. Spottiswoode,
New-Street-Square.